

# An estuarine observatory for real-time telemetry of migrant macrofauna: Design, performance, and constraints

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## Web Appendix 1

Number of 15-minute time periods over 305 days during which an identity code was spuriously logged at an allowed rate of 2 received code signals per period for 204 transmitter identification codes prior to deployment. The search period is the number of days from March 1, 2003, to December 31, 2003, less the days that a particular code was deployed on a fish. The majority of codes (143) were never detected spuriously at this allowed level; another 21 were detected only once. Code 1 was spuriously detected frequently and may mimic a common natural noise. However, not a single Code 1 (and most other codes) detection would have been logged at the increased filter criterion of three signals per 15-min time period; thus, even real contacts from a deployed tag Code 1 could be easily separated from spurious contacts.

Code	Log events	Tag date	Search period	Daily Error Rate
1	803	Not deployed	305	2.641
3	1	Not deployed	305	0.003
4	1	Not deployed	305	0.003
5	0	Not deployed	305	—
6	1	Not deployed	305	0.003
7	0	Not deployed	305	—
8	2	Not deployed	305	0.007
9	0	Not deployed	305	—
10	1	Not deployed	305	0.003
11	0	Not deployed	305	—
12	0	Not deployed	305	—
13	0	Not deployed	305	—
14	0	Not deployed	305	—
15	6	24 Oct 03	237	0.025
16	4	Not deployed	305	0.013
17	6	Not deployed	305	0.020
18	6	Not deployed	305	0.020
19	0	Not deployed	305	—

Code	Log events	Tag date	Search period	Daily Error Rate
20	0	Not deployed	305	—
21	0	Not deployed	305	—
22	2	Not deployed	305	0.007
23	0	Not deployed	305	—
24	0	Not deployed	305	—
25	0	Not deployed	305	—
26	0	Not deployed	305	—
27	0	Not deployed	305	—
28	0	Not deployed	305	—
29	0	Not deployed	305	—
30	2	Not deployed	305	0.007
31	6	Not deployed	305	0.020
32	7	Not deployed	305	0.023
33	1	Not deployed	305	0.003
34	0	Not deployed	305	—
35	0	Not deployed	305	—
36	0	Not deployed	305	—
37	0	Not deployed	305	—
38	0	Not deployed	305	—
39	0	Not deployed	305	—
40	0	Not deployed	305	—
41	0	Not deployed	305	—
42	0	Not deployed	305	—
43	0	Not deployed	305	—
44	2	Not deployed	305	0.007
45	0	Not deployed	305	—
46	4	Not deployed	305	0.013
47	3	Not deployed	305	0.010
48	1	Not deployed	305	0.003
49	4	17 Aug 03	169	0.024
50	0	15 Aug 03	167	—
51	0	15 Aug 03	167	—
52	3	Not deployed	305	0.010
53	0	Not deployed	305	—
54	0	17 Aug 03	169	—
55	0	17 Aug 03	169	—

Code	Log events	Tag date	Search period	Daily Error Rate	Code	Log events	Tag date	Search period	Daily Error Rate
56	0	Not deployed	305	—	109	2	Not deployed	305	0.007
57	0	17 Aug 03	169	—	110	5	Not deployed	305	0.016
58	10	Not deployed	305	0.033	111	1	Not deployed	305	0.003
59	7	Not deployed	305	0.023	112	0	Not deployed	305	—
60	1	Not deployed	305	0.003	113	2	30 Aug 03	181	0.011
61	3	Not deployed	305	0.010	114	5	Not deployed	305	0.016
62	11	Not deployed	305	0.036	115	2	Not deployed	305	0.007
63	0	Not deployed	305	—	116	0	Not deployed	305	—
64	0	Not deployed	305	—	117	1	Not deployed	305	0.003
65	0	Not deployed	305	—	118	0	19 Aug 03	171	—
66	0	Not deployed	305	—	119	0	03 Sep 03	186	—
67	0	Not deployed	305	—	120	6	Not deployed	305	0.020
68	0	Not deployed	305	—	121	1	Not deployed	305	0.003
69	0	Not deployed	305	—	122	8	Not deployed	305	0.026
70	0	10 Oct 03	223	—	123	0	02 May 03	62	—
71	1	Not deployed	305	0.003	124	0	02 May 03	62	—
72	6	Not deployed	305	0.020	125	0	02 May 03	62	—
73	3	Not deployed	305	0.010	126	0	02 May 03	62	—
74	2	Not deployed	305	0.007	127	0	10 June 03	101	—
75	8	Not deployed	305	0.026	128	0	27 Aug 03	179	—
76	0	Not deployed	305	—	129	25	Not deployed	305	0.082
77	0	Not deployed	305	—	130	0	Not deployed	305	—
78	12	Not deployed	305	0.039	131	0	Not deployed	305	—
79	0	18 July 03	139	—	132	1	Not deployed	305	0.003
80	0	Not deployed	305	—	133	0	Not deployed	305	—
81	0	Not deployed	305	—	134	0	08 May 03	68	—
82	0	Not deployed	305	—	135	0	24 July 03	145	—
83	0	Not deployed	305	—	136	0	08 May 03	68	—
84	0	27 June 03	118	—	137	0	10 Oct 03	223	—
85	0	Not deployed	305	—	138	0	Not deployed	305	—
86	1	Not deployed	305	0.003	139	0	Not deployed	305	—
87	0	Not deployed	305	—	140	0	Not deployed	305	—
88	0	Not deployed	305	—	141	0	26 Sep 03	209	—
89	0	Not deployed	305	—	142	0	25 Oct 03	238	—
90	0	Not deployed	305	—	143	1	Not deployed	305	0.003
92	0	Not deployed	305	—	144	0	Not deployed	305	—
93	2	Not deployed	305	0.007	145	0	Not deployed	305	—
94	1	20 Aug 03	172	0.006	146	0	Not deployed	305	—
95	0	02 Apr 03	32	—	147	0	02 Sep 03	32	—
96	0	02 Apr 03	32	—	148	1	19 Aug 03	171	0.006
97	0	02 Apr 03	32	—	149	0	03 Apr 03	305	—
98	0	02 Apr 03	32	—	150	0	Not deployed	305	—
99	0	02 Apr 03	32	—	151	0	25 Mar 03	24	—
100	20	Not deployed	305	0.066	152	0	Not deployed	305	—
101	18	Not deployed	305	0.059	153	0	27 Mar 03	26	—
102	0	Not deployed	305	—	154	0	Not deployed	305	—
103	1	Not deployed	305	0.003	155	0	Not deployed	305	—
104	0	17 Aug 03	169	—	156	0	Not deployed	305	—
105	0	02 Apr 03	32	—	157	10	Not deployed	305	0.033
106	0	14 Apr 03	44	—	158	0	Not deployed	305	—
108	0	05 May 03	65	—	159	1	Not deployed	305	0.003

Code	Log events	Tag date	Search period	Daily Error Rate
160	0	Not deployed	305	—
161	0	Not deployed	305	—
162	5	14 Oct 03	227	0.022
163	2	22 May 03	82	0.024
164	0	Not deployed	305	—
166	0	Not deployed	305	—
167	5	14 Aug 03	166	0.030
169	0	Not deployed	305	—
170	0	Not deployed	305	—
171	0	Not deployed	305	—
172	0	Not deployed	305	—
173	0	Not deployed	305	—
174	0	Not deployed	305	—
176	0	29 Aug 03	181	—
177	1	Not deployed	305	0.003
178	0	Not deployed	305	—
179	0	Not deployed	305	—
180	0	16 Oct 03	229	—
181	0	Not deployed	305	—
182	0	22 Aug 03	174	—
183	3	Not deployed	305	0.010
184	0	24 Aug 03	176	—
185	0	Not deployed	305	—
186	0	Not deployed	305	—
187	0	27 Oct 03	240	—
188	0	Not deployed	305	—
189	1	24 June 03	115	0.009
190	0	22 Aug 03	174	—
191	0	29 Oct 03	242	—
192	1	17 Oct 03	230	0.004
193	0	Not deployed	305	—
194	0	Not deployed	305	—
195	0	Not deployed	305	—
196	0	Not deployed	305	—
197	0	20 Oct 03	233	—
198	0	21 Nov 03	265	—
199	0	13 Oct 03	226	—
200	0	Not deployed	305	—
201	0	Not deployed	305	—
202	0	22 Aug 03	174	—
203	0	Not deployed	305	—
204	0	Not deployed	305	—
205	0	Not deployed	305	—
206	0	Not deployed	305	—
207	0	Not deployed	305	—
208	0	Not deployed	305	—
209	0	Not deployed	305	—
210	0	Not deployed	305	—